



SEQUENCE LISTING

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Bulet, Phillipe
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<120> GENE CODING FOR HELIOMICINE, AND USE THEREOF

<130> A33595-PCT-USA (075188.0110)

<140> 09/673,274

<141> 1999-04-12

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<151> 1999-04-12

<150> FR 98 04933

<151> 1998-04-15

<160> 53

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 147

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<400> 1

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agtgactgca acggcgagtg caagcgccgc ggttacaagg gtggccattg tggatccttc 120

gctaacgtta actgttgggtg tgaaaacc 147

<210> 2

<211> 169

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<400> 2

gataagctta tccgttcctg cgtgtgggt gctgtgaact acacttccga ttgcaacggt 60

gagtgcgaaga ggaggggtta caaggggtgt cactgcggtt ccttcgctaa cgtgaactgc 120

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<213> Artificial Sequence

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gtgctgtgaa ctacacttcc gattgcaacg gtgagtcaa gaggaggggt tacaaggggtg 180
gtcactgcfg ttccttcgct aacgtgaact gctggtgcga gacttgagag ctcggcgagg 240
cgaacgtgtc gacggatccg g 261

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<220>
<223> Synthetic oligonucleotide

<400> 4
gcgtcgacgc gatggggttc gtgcttttct ctcagcttcc atctttcctt cttgtgtcta 60
ctcttcttct tttccttgtg atctctcact cttgccgtgc tggagacgcg aattcacaca 120

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ctcttcttct tttcc 75

<210> 6
<211> 72
<212> DNA
<213> Artificial Sequence

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<400> 6
tcgccggcac ggcaagagta agagatcaca aggaaaagaa gaagagtaga cacaagaagg 60
aaagatggaa gc 72

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<211> 80
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<223> Synthetic oligonucleotide

<400> 7
gataagctta tcggttcctg cgtgtgggggt gctgtgaact acatttccga ttgcaacgggt 60
gagtgaaga ggaggggtta 80

<210> 8
<211> 109
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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<400> 8

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<211> 85

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide

<400> 9

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ctctagagtc gacctgcagg catgc 85

<210> 10

<211> 66

<212> DNA

<213> Artificial Sequence

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tagagg 66

<210> 11

<211> 93

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gctcgagggc ccaacctcag tacctggttc agg 93

<210> 12

<211> 93

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide

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gcgtttaaac ttaattaagt gtggcctgac tgg 93

<210> 13

<211> 50

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 <210> 15
 <211> 81
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 atcgtgcacg gcgccgaatt c 81

 <210> 16
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide

 <400> 16
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 <210> 17
 <211> 32
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide

 <400> 17
 ggctcgagtc aagtctcgca ccagcagttc ac 32

 <210> 18
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<220>

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<400> 18

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gattgcaacg gtgagtgcaa gaggaggggt tacaaggggtg gtcactgcgg ttccttcgct 180
aacgtgaact gctggtgcga gacttgactc gag 213
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<210> 19

<211> 838

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<221> promoter

<222> (7)...(532)

<221> misc_structure

<222> (533)...(568)

<221> terminator

<222> (569)...(832)

<400> 19

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ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
gaatacgtag aaattgaaaa agaagaacca ggcaagaaa agaacttga agacgtaagc 240
actgacgaca acaatgaaaa gaagaagata aggtcgggtga ttgtgaaaga gacatagagg 300
acacatgtaa ggtgaaaaat gtaagggcgg aaagtaacct tatcaciaaag gaatcttatac 360
ccccactact taccctttta tatttttccg tgtcattttt gcccttgagt tttcctatat 420
aaggaaccaa gttcggcatt tgtgaaaaa agaaaaaatt tgggtgtaagc tattttcttt 480
gaagtactga ggatacaact tcagagaaat ttgtaagttt gtagatctcg attctagaag 540
gcctgaattc gagctcggta ccggatccaa ttcccgatcg ttcaaacatt tggcaataaa 600
gtttcttaag attgaaatcct gttgccgggtc ttgcatgat tatcatataa tttctgttga 660
attacgttaa gcatgtaata attaacatgt aatgcatgac gttatttatg agatgggttt 720
ttaatgattag agtcccgcga ttatacattt aatacgcgat agaaaacaaa atatagcgcg 780
caaactagga taaattatcg cgcgcgggtgt catctatggt actagatcgg ggatcgcg 838
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<210> 20

<211> 1036

<212> DNA

<213> Artificial Sequence

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<221> promoter

<222> (7)...(532)

<221> CDS

<222> (539)...(736)

<221> terminator

<222> (767)...(1030)

<400> 20
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ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
actgacgaca acaatgaaaa gaagaagata aggtcgggtga ttgtgaaaga gacatagagg 300
acacatgtaa ggtggaaaaat gtaagggcgg aaagtaacct tatcaciaaag gaatcttacc 360
ccccactact taccctttta ttttttccg tgtcattttt gcccttgagt tttcctatat 420
aaggaaccaa gttcggcatt tgtgaaaaca agaaaaaatt tgggtgtaagc ttttttcttt 480
gaagtactga ggatacaact tcagagaaat ttgtaagttt gtagatctcg attctaga 538
atg gcc tgc acc aac aac gcc atg agg gcc ctc ttc ctc ctc gtg ctc 586
Met Ala Cys Thr Asn Asn Ala Met Arg Ala Leu Phe Leu Leu Val Leu
1 5 10 15

ttc tgc atc gtg cac ggc gat aag ctt atc ggt tcc tgc gtg tgg ggt 634
Phe Cys Ile Val His Gly Asp Lys Leu Ile Gly Ser Cys Val Trp Gly
20 25 30

gct gtg aac tac act tcc gat tgc aac ggt gag tgc aag agg agg ggt 682
Ala Val Asn Tyr Thr Ser Asp Cys Asn Gly Glu Cys Lys Arg Arg Gly
35 40 45

tac aag ggt ggt cac tgc ggt tcc ttc gct aac gtg aac tgc tgg tgc 730
Tyr Lys Gly Gly His Cys Gly Ser Phe Ala Asn Val Asn Cys Trp Cys
50 55 60

gag act tgactcgagg gggggcccgg taccggatcc aattcccgat cgttcaaaca 786
Glu Thr
65

tttggaata aagtttctta agattgaatc ctggtgccgg tcttgcatg attatcatat 846
aatttctggt gaattacggt aagcatgtaa taattaacat gtaatgcatg acgttattta 906
tgagatgggt ttttatgatt agagtccgc aattatacat ttaatacgcg atagaaaaaca 966
aaatatagcg cgcaactag gataaattat cgcgcgcggt gtcactatg ttactagatc 1026
gggatcgat 1036

<210> 21

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<400> 21

agcttgata aaagagacaa gttgattggc agctgtgttt ggggcgccgt ca 52

<210> 22

<211> 56

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<400> 22

agtgtagttg acggcgcccc aaacacagct gccaatcaac ttgtctcttt tatcca 56

<210> 23

<211> 52
<212> DNA
<213> Artificial Sequence

<220>
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<400> 23
actacactag tgactgcaac ggcgagtgca agcgccgcgg ttacaagggt gg 52

<210> 24
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
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<400> 24
cacaatggcc acccttgtaa ccgcggcgct tgcaactcgcc gttgcagtca ct 52

<210> 25
<211> 56
<212> DNA
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<220>
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<400> 25
ccattgtgga tccttcgcta acgttaactg ttgggtgtaa acctgatagg tcgaca 56

<210> 26
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 26
gatctgtcga cctatcaggt ttcacaccaa cagttaacgt tagcgaagga tc 52

<210> 27
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
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<400> 27
gatccttcgc taacgttaac tgttggtgta gaacctgata gg 42

<210> 28
<211> 42
<212> DNA
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<220>
 <223> Synthetic oligonucleotide

 <400> 28
 tcgacctatc aggttctaca ccaacagtta acgtagcga ag 42

 <210> 29
 <211> 32
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 <400> 29
 ctagtgactg caacggcgag tgcttggtgc gc 32

 <210> 30
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 30
 gcaacaagca ctgccgttg cagtca 26

 <210> 31
 <211> 32
 <212> DNA
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 <400> 31
 ctagtgactg cgctgctgag tgcaagcggc gc 32

 <210> 32
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 <220>
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 <400> 32
 gccgcttgca ctcagcagcg cagtca 26

 <210> 33
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 <220>
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 <400> 33

agcttgata aaagagctgc tgctgctggt agctgtggtt 40
 <210> 34
 <211> 18
 <212> DNA
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 <400> 34
 ggggcgccgt caactaca 18
 <210> 35
 <211> 22
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 <400> 35
 ctagttagt tgacggcgcc cc 22
 <210> 36
 <211> 36
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 aaacacagct accagcagca gcagctcttt tatcca 36
 <210> 37
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 <223> Synthetic oligonucleotide
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 ctagtgactg cgctgctgag tgcttggtgc gc 32
 <210> 38
 <211> 26
 <212> DNA
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 <223> Synthetic oligonucleotide
 <400> 38
 gcaacaagca ctcagcagcg cagtca 26
 <210> 39
 <211> 51

<212> PRT
<213> Artificial Sequence

<220>
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<221> VARIANT
<222> (1)...(10)
<223> region of variable length from 1 to 10 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (12)...(21)
<223> region of variable length from 1 to 10 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (23)...(25)
<223> Xaa = any amino acid

<221> VARIANT
<222> (27)...(35)
<223> region of variable length from 1 to 9 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (37)...(43)
<223> region of variable length from 1 to 7 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (45)...(45)
<223> Xaa = any amino acid

<221> VARIANT
<222> (47)...(51)
<223> region of variable length from 1 to 5 amino acids
where Xaa = any amino acid

<400> 39
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
1 5 10 15
Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Cys Xaa Xaa
35 40 45
Xaa Xaa Xaa
50

<210> 40
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<221> VARIANT

<222> (2)...(2)
<223> Xaa = any basic amino acid

<221> VARIANT
<222> (3)...(7)
<223> region of variable length from 0 to 5 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (1)...(9)
<223> Xaa = Any Amino Acid

<400> 40
Lys Xaa Xaa Xaa Xaa Xaa Xaa Gly His
1 5

<210> 41
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 41
Lys Arg Arg Gly Tyr Lys Gly Gly His
1 5

<210> 42
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<221> VARIANT
<222> (1)...(9)
<223> region of variable length from 0 to 9 amino acids
where Xaa = any amino acid

<221> VARIANT
<222> (11)...(11)
<223> Xaa = any amino acid

<221> VARIANT
<222> (1)...(11)
<223> Xaa = Any Amino Acid

<400> 42
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Xaa
1 5 10

<210> 43
<211> 10
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<221> VARIANT

<222> (2)...(9)

<223> region of variable length from 0 to 8 amino acids
where Xaa = any amino acid

<221> VARIANT

<222> (1)...(10)

<223> Xaa = Any Amino Acid

<400> 43

Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
1 5 10

<210> 44

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<221> VARIANT

<222> (2)...(6)

<223> region of variable length from 0 to 5 amino acids
where Xaa = any amino acid

<221> VARIANT

<222> (1)...(7)

<223> Xaa = Any Amino Acid

<400> 44

Gly Xaa Xaa Xaa Xaa Xaa Asn
1 5

<210> 45

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<221> VARIANT

<222> (2)...(5)

<223> region of variable length from 0 to 4 amino acids
where Xaa = any amino acid

<221> VARIANT

<222> (1)...(5)

<223> Xaa = Any Amino Acid

<400> 45

Glu Xaa Xaa Xaa Xaa
1 5

<210> 46
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
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<400> 46
Asp Lys Leu Ile Gly Ser
1 5

<210> 47
<211> 10
<212> PRT
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<220>
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<400> 47
Val Trp Gly Ala Val Asn Tyr Thr Ser Asp
1 5 10

<210> 48
<211> 7
<212> PRT
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<220>
<223> Synthetic peptide

<400> 48
Gly Ser Phe Ala Asn Val Asn
1 5

<210> 49
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 49
Leu Leu Arg Gly Tyr Lys Gly Gly His
1 5

<210> 50
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<220>

<223> Synthetic peptide

<400> 50

Asn Gly Glu

1

<210> 51

<211> 3

<212> PRT

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<223> Synthetic peptide

<400> 51

Ala Ala Glu

1

<210> 52

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> Synthetic peptide

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Ala Ala Ala Ala Gly Ser

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5

<210> 53

<211> 5

<212> PRT

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<220>

<223> Synthetic peptide

<400> 53

Ser Leu Asp Lys Arg

1

5